

# Organizational Learning and Wildland Fires

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1. Of all the elements of a learning organization, the two that seem most relevant to the wildland fire community are: (a) to improve the transfer of, and (b) to ensure the retention of, critical fire suppression and prescribed burn knowledge.
2. The Lessons Learned Center needs to play a critical role in these activities. It needs to: (a) help capture tacit fire suppression and prescribed burn knowledge before it disappears, (b) help share new, emerging knowledge in real time with fire teams immediately after the knowledge has been discovered, (c) help develop and articulate larger, enduring lessons after fires have been suppressed or prescribed burns have been carried out, (d) help devise formats and distribution systems for communicating critical knowledge, and (e) help develop and communicate critical learning tools and techniques such as AARs to the larger firefighting community.
3. None of these things can be done if the Lessons Learned Center works in isolation. It needs to establish multiple, direct partnerships with the field. At a minimum, this requires an advisory or oversight group to provide top-level direction and credibility, continuing links with burn bosses and incident commanders to ensure that their needs are being discussed, understood, and met, and association with one or two pilot regions that are willing to become early adopters of new approaches and will demonstrate, through their behaviors, the power and impact of these tools and techniques.
4. There are a number of barriers that currently stand in the way of the firefighting community becoming more a learning organization. Many of these barriers are cultural. In particular, the penalty for mistakes is high, so errors are often hidden or left undiscussed; there is a strong hierarchical culture, which means that dissent from below is discouraged and minority views are given only limited attention; time is critical and attention is focused during the fire season, which means that reflective, thinking time spent on AARs or similar activities is often viewed as unproductive or a diversion from “real work”; and decisiveness is valued both within the community and by the media, which means that time spent learning is seen by many as unnecessary dithering and delay.
5. There are also technical and administrative barriers to success. Prescribed burns, especially when they get out of control, are frequently followed by reports and analyses, but each of these is a “one-off.” These reports tend to focus on the particulars of that situation rather than general principles; they

also focus far more on the technical elements of the burn and less on social and group dynamics, communication and decision-making processes, or other administrative issues that could have produced problems. In addition, they almost focus on “things gone wrong.” Reports are not written about prescribed burns “gone right.” All of these factors make it very difficult to develop and distill a crisp set of practical, applied, generalizable lessons learned.

6. These arguments suggest a number of important agenda items going forward (many of which appear to already be underway or at least in the proposal stage). They include more “customer” research, increased prototyping and experimentation, improved knowledge capture and dissemination, and detailed process and system design.
7. First, the leaders of the Lessons Learned Center need to further engage in networking, talking at length with leaders in both the fire suppression and prescribed burn communities. Their needs must be understood clearly, as must the state of current practice. For example, how often are AARs used? By whom? How effective are they perceived to be? Who are leading-edge users, and what practices do they employ? What kinds of information, in what formats, would be most useful to burn bosses and incident commanders (a) before they take on a natural fire or start a prescribed burn, (b) while fighting a fire or conducting a prescribed burn, and (c) after fighting a fire or completing a prescribed burn? Who currently taps into the Lessons Learned website? What is their evaluation of the materials available? What would they like to see more of, and what would they like less of?
8. Second, the leaders of the Lessons Learned Center, together with regional foresters, need to pick one or more regions to serve as prototypes for the fire community becoming more of a learning organization. Here, I would go where there is already support and enthusiasm; progress is a great deal easier when you do not first have to overcome deeply entrenched resistance. In my view, the greatest opportunity is to use AARs as a leverage point for building a full-fledged “learning after doing” system. This would involve several steps: (a) holding a conference on AARs to which “thought leaders” in the regional wildland fires community were invited in order to gain their commitment and interest, while also stimulating wider use of AARs, (b) convincing the attendees at the conference to begin experimenting with AARs and to have them report back on their progress and share *their* lessons learned (perhaps at another conference, scheduled a year later), and (c) picking one or two burn bosses to work as partners with the Lessons Learned Center in an effort to experiment with real-time feedback and information sharing, at multiple organizational levels (crews, functions, the entire leadership team) on a prescribed burn in order to begin developing a complete “learning after doing” system.

9. Third, the Lessons Learned Center needs to work with the prototype region on improved knowledge capture and dissemination. There are a variety of opportunities here. Much of the community's expert knowledge is tacit and likely to disappear as old hands retire; videotaped interviews are a wonderful way of preserving and capturing their knowledge and preserving it for future generations. A few successful prescribed burns should be studied as a way of identifying "things gone right;" the results could then be compared to a distillation of the findings from several prescribed burn reports focused on fires that had gotten out of control. The result might be a short list of actionable, best-practice items that every burn boss should know. Training needs to be improved, especially for newcomers, so that each year leaders are not faced with the challenge, as one participant in our session put it, of "the never-ending cycle of having to teach and re-teach at the entry level and one level up." My own preference would be for an ongoing set of sessions on AARs, decision-making skills, crew leadership, and other managerial topics.
10. Finally, the Lessons Learned Center needs to begin taking a leadership role in process and systems design. This is a long-term goal, not an immediate objective. Eventually, however, I believe that the center should provide guidance to the field on how best to carry out critical learning processes. Knowledge transfer and retention are the two most obvious examples. With time, I would like to see the center become *the* experts in the wildland fire community on how best to collect, distill, codify, and disseminate critical knowledge, much as the U. S. Army Center for Lessons Learned does for military commanders and troops.